

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [62 FR 10 NO. 1 01/02/97]

[Docket No. 96-CE-09-AD; Amendment 39-9872; AD 97-01-01]

RIN 2120-AA64

Airworthiness Directives; The New Piper Aircraft, Inc. PA24, PA28R, PA30, PA32R, PA34, and PA39 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that supersedes AD 95-20-07, which currently requires repetitively inspecting the main gear sidebrace studs for cracks on certain The New Piper Aircraft, Inc. (Piper) PA24, PA28R, PA30, PA32R, PA34, and PA39 series airplanes, and replacing any cracked main gear sidebrace stud. This AD retains the repetitive inspection and possible replacement requirements of AD 95-20-07; specifies in the "Applicability" section of the AD that certain Model PA34-200T airplanes could contain a certain main gear sidebrace assembly configuration that is not affected; and incorporates additional modification and replacement options. This AD results from additional information received by the Federal Aviation Administration (FAA) after the issuance of AD 95-20-07 on the design and service history of the affected airplanes concerning this subject. The actions specified by this AD are intended to prevent a main landing gear collapse caused by main gear sidebrace stud cracks, which could result in loss of control of the airplane during landing operations.

EFFECTIVE DATE: February 7, 1997.

ADDRESSES: Information that applies to this AD may be examined at the FAA, Central Region, Office of the Assistant Chief Counsel, Attention: Rules Docket 96-CE-09-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

FOR FURTHER INFORMATION CONTACT: Christina Marsh, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, Campus Building, 1701 Columbia Avenue, suite 2-160, College Park, Georgia 30337-2748; telephone (404) 305-7362; facsimile (404) 305-7348.

SUPPLEMENTARY INFORMATION:

Events Leading to This Action

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to Piper PA24, PA28R, PA30, PA32R, PA34, and PA39 series airplanes was published in the **Federal Register** on April 25, 1996 (61 FR 18299). The action proposed to supersede AD 95-20-07 with a new AD that would (1) retain the requirement of repetitively inspecting the main gear sidebrace assembly, and replacing any cracked main gear sidebrace stud. This includes the inspection-terminating replacement contained in AD 95-20-07; (2) specify in the "Applicability" section of the current AD that certain Piper Model PA34-200T airplanes could incorporate a main gear sidebrace assembly containing the 5/8-inch stud, part number (P/N) 78717-02, with a two-piece bushing, P/N 67026-09, and would not be affected by the proposed AD; and (3) incorporate, as an option, an inspection-terminating modification for Piper PA28R, PA32R, and PA34 series airplanes. This modification consists of reaming the existing two-piece bushings, P/N 67026-6, to an inside diameter of .624-inch to .625-inch, rechamfering the bushing, and installing the 5/8-inch stud, P/N 78717-02.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the two comments received from one commenter.

Comment Issue No. 1: Include a Specific FAA-approved Parts Manufacture Approval (PMA) in the AD as Replacement Parts

The commenter, Webco Aircraft (Webco), states that it holds a PMA for main gear sidebrace studs to equip the Piper Models PA24, PA24-250, PA24-260, PA24-400, PA30, and PA39 airplanes. Webco requests that the FAA reference these main gear sidebrace studs in the AD.

The FAA does not concur. FAA policy is to not reference PMA parts in AD's, unless the FAA determines that the unsafe condition applies to the PMA parts. If these Webco parts are installed, then the actions of this AD would not apply because the parts are an FAA-approved equivalent to the Piper main gear sidebrace studs that, when installed, eliminate the repetitive inspection requirement of the AD.

Comment Issue No. 2: Additional Information Added to the AD

Webco recommends that the FAA add cautionary information to the AD on reaming and chamfering the existing two-piece bushings, P/N 67026-6, on the Piper PA-28R, PA-32R, and PA-34 series airplanes. Webco states that the manufacturing and service limits for the P/N 67026-6 bushings are so close that reaming could induce gouges that are deeper than the minimum dimension specified by The New Piper Aircraft, Inc. Webco also recommends that the FAA incorporate specific guidance into the AD, emphasizing that only the head side of the bushing requires chamfering to accommodate the radius in the shank of the sidebrace stud.

The FAA concurs that additional guidance on chamfering the bushing would be helpful and has reworded the AD to incorporate the commenter's specific recommendation.

The FAA does not concur that more guidance is needed on reaming the bushings. The proposal specifies reaming the inside diameter of the bushings to a dimension of .624-inch to .625-inch. If the bushing is reamed to a dimension other than that specified in the AD, then compliance with the AD would not be accomplished.

The FAA's Determination

After careful review of all available information related to the subject presented above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed except for the incorporation of guidance on chamfering the bushings and minor editorial corrections. The FAA has determined that the incorporation and minor corrections will not change the meaning of the AD and will not add any additional burden upon the public than was already proposed.

Cost Impact

The FAA estimates that 13,200 airplanes in the U.S. registry will be affected by this AD, that it will take approximately 5 workhours per airplane to accomplish the required action, and that the average labor rate is approximately \$60 an hour. Based on these figures, the total cost impact of the required inspection on U.S. operators is estimated to be \$3,960,000. This figure represents the total cost of the required initial inspection, and does not reflect costs for any of the required repetitive inspections or possible replacements. The FAA has no way of determining how many main gear sidebrace studs may need replacement or how many repetitive inspections each owner/operator may incur over the life of the airplane.

In addition, this AD requires the same inspections required by AD 95-20-07. The only difference between this AD and AD 95-20-07 is the addition of an inspection-terminating modification option. This AD does not provide any additional cost impacts over that already required by AD 95-20-07.

Regulatory Impact

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption "ADDRESSES".

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 USC 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing Airworthiness Directive (AD) 95-20-07, Amendment 39-9386, and by adding a new AD to read as follows:

97-01-01 THE NEW PIPER AIRCRAFT, INC.: Amendment 39-9872; Docket No. 96-CE-09-AD. Supersedes AD 95-20-07, Amendment 39-9386.

Applicability: The following airplane models and serial numbers, certificated in any category:

1. All serial numbers of Models PA24, PA24-250, PA24-260, PA24-400, PA30, and PA39 airplanes;
2. The following model and serial number airplanes that are not equipped with a Piper part number (P/N) 78717-02 main landing gear sidebrace stud in both right and left main landing gear sidebrace bracket assemblies:

Model	Serial Numbers
PA28R-180	28R-30002 through 28R-31135, and 28R-7130001 through 28R-7130013
PA28R-200	28R-35001 through 28R-35820, and 28R-7135001 through 28R-7635539
PA28R-201	28R-7737002 through 28R-7737096
PA28R-201T	28R-7703001 through 28R-7703239
PA32R-300	32R-7680001 through 32R-7780444
PA34-200	all serial numbers
PA34-200T	34-7570001 through 34-7770372

NOTE 1: P/N 78717-02 sidebrace stud was installed at manufacture on Piper Model PA34-200T airplanes, serial numbers 34-7670325 through 34-7770372.

NOTE 2: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required initially as follows, and thereafter as specified in the body of this AD:

1. For the affected Models PA28R-180, PA28R-200, PA28R-201, PA28R-201T, PA32R-300, PA34-200, and PA34-200T airplanes: Within the next 100 hours time-in-service (TIS) after the effective date of this AD or, if the main gear sidebrace stud has already been inspected or replaced as specified in this AD, within 500 hours TIS after the last inspection or replacement, whichever occurs later.
2. For the affected Models PA24, PA24-250, PA24-260, PA24-400, PA30, and PA39 airplanes: Within the next 100 hours TIS after the effective date of this AD or, if the main gear sidebrace stud has already been inspected or replaced as specified in this AD, within 1,000 hours TIS after the last inspection or replacement, whichever occurs later.

To prevent main landing gear (MLG) collapse caused by main gear sidebrace stud cracks, which could result in loss of control of the airplane during landing operations, accomplish the following:

NOTE 3: The paragraph structure of this AD is as follows:

Level 1: (a), (b), (c), etc.

Level 2: (1), (2), (3), etc.

Level 3: (i), (ii), (iii), etc.

Level 2 and Level 3 structures are designations of the Level 1 paragraph they immediately follow.

(a) Remove both the left and right main gear sidebrace studs from the airplane in accordance with the instructions contained in the Landing Gear section of the maintenance manual, and inspect each main gear sidebrace stud for cracks, using Type I (fluorescent) liquid penetrant or magnetic particle inspection methods. Figure 1 of this AD depicts the area of the sidebrace stud shank where the sidebrace stud is to be inspected.

NOTE 4: All affected Models PA24 and PA24-250 airplanes were equipped at manufacture with P/N 20829-00 main gear sidebrace studs. All affected Models PA24-260, PA24-400, PA30, and PA39 airplanes were equipped at manufacture with P/N 22512-00 main gear sidebrace studs. The Appendix included with this AD contains information on determining the P/N of the bracket assembly (which contains the main gear side brace stud) on the affected PA28R, PA32R, and PA34 series airplanes.

(1) For any main gear sidebrace stud found cracked, prior to further flight, replace the cracked stud with an FAA-approved serviceable part (part numbers referenced in the table in paragraph (b) of this AD or FAA-approved equivalent) in accordance with the instructions contained in the Landing Gear section of the applicable maintenance manual, and accomplish one of the following, as applicable:

(i) Reinspect and replace (as necessary) as specified in paragraph (b) of this AD; or

(ii) For the affected Models PA28R-180, PA28R-200, PA28R-201, PA28R-201T, PA32R-300, PA34-200, and PA34-200T airplanes, the P/N 95299-00 or 95299-02 main gear sidebrace studs are no longer manufactured. Install a new main gear sidebrace stud bracket assembly, P/N 95643-06, P/N 95643-07, P/N 95643-08, or P/N 95643-09, as applicable. No repetitive inspections will be required by this AD for these affected airplane models when this bracket assembly is installed; or

(iii) For the affected Models PA28R-180, PA28R-200, PA28R-201, PA28R-201T, PA32R-300, PA34-200, and PA34-200T airplanes, ream the existing two-piece bushings, P/N 67026-6, to an inside diameter of .624-inch to .625-inch, chamfer the head side of the bushing to accommodate the radius in the shank of the main gear sidebrace stud, and install the 5/8-inch stud, P/N 78717-02. No repetitive inspections will be required by this AD when this action is accomplished. If the bushings cannot be reamed while installed in the bracket (i.e., the bushings are loose), then install a main gear sidebrace bracket assembly, P/N 95643-06, P/N 95643-07, P/N 95643-08, or P/N 95643-09, as applicable. No repetitive inspections will be required by this AD when this bracket assembly is installed.

(2) For any main gear sidebrace stud not found cracked, prior to further flight, reinstall the uncracked stud in accordance with the instructions contained in the Landing Gear section of the applicable maintenance manual, and reinspect and replace (as necessary) as specified in paragraph (b) of this AD.

(b) Reinspect both the left and right main gear sidebrace studs, using Type I (fluorescent) liquid penetrant or magnetic particle inspection methods. Replace any cracked stud or reinstall any uncracked stud as specified in paragraphs (a)(1) and (a)(2) of this AD, respectively:

Part Number installed	TIS Inspection Interval	Model Airplanes Installed on
20829-00 (Piper parts) or FAA-approved equivalent	1,000 hours	PA24 and PA24-250
22512-00 (Piper parts) or FAA-approved equivalent	1,000 hours	PA24-260, PA24-400, PA30, and PA39
95299-00 or	500 hours	PA28R-180, PA28R-200,

95299-02 (Piper parts)
or FAA-approved
equivalent

PA28R-201, PA28R-201T,
PA32R-300, PA34-200, and
PA34-200T

NOTE 5: Accomplishing the actions of this AD does not affect the requirements of AD 77-13-21, Amendment 39-3093. The tolerance inspection requirements of that AD still apply for Piper PA24, PA30, and PA39 series airplanes.

(c) Owners/operators of the affected Models PA28R-180, PA28R-200, PA28R-201, PA28R-201T, PA32R-300, PA34-200, and PA34-200T airplanes may accomplish one of the following at any time to terminate the repetitive inspection requirement of this AD:

(1) Install a main gear sidebrace bracket assembly, P/N 95643-06, P/N 95643-07, P/N 95643-08, or P/N 95643-09, as applicable, which contains the 5/8-inch diameter main gear sidebrace stud, P/N 78717-02, and the one-piece bushing, P/N 67026-12; or

(2) Ream the existing two-piece bushings, P/N 67026-6, to an inside diameter of .624-inch to .625-inch, chamfer the head side of the bushing to accommodate the radius in the shank of the main gear sidebrace stud, and install the 5/8-inch stud, P/N 78717-02. If the bushings cannot be reamed while installed in the bracket (i.e., the bushings are loose), then install a main gear sidebrace bracket assembly, P/N 95643-06, P/N 95643-07, P/N 95643-08, or P/N 95643-09, as applicable.

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(e) An alternative method of compliance or adjustment of the initial or repetitive compliance times that provides an equivalent level of safety may be approved by the Manager, Atlanta Aircraft Certification Office (ACO), Campus Building, 1701 Columbia Avenue, Suite 2-160, College Park, Georgia 30337-2748. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO. Alternative methods of compliance approved in accordance with AD 95-20-07, Amendment 39-9386, are considered approved as alternative methods of compliance with this AD.

NOTE 6: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

(f) Information related to this AD may be inspected at the FAA, Central Region, Office of the Assistant Chief Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri.

(g) This amendment supersedes AD 95-20-07, Amendment 39-9386.

(h) This amendment becomes effective on February 7, 1997.

FOR FURTHER INFORMATION CONTACT:

Christina Marsh, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, Campus Building, 1701 Columbia Avenue, suite 2-160, College Park, Georgia 30337-2748; telephone (404) 305-7362; facsimile (404) 305-7348.

APPENDIX TO AD 97-01-01
INFORMATION TO DETERMINE MAIN GEAR SIDEBRACE STUD
ASSEMBLY PART NUMBER (P/N)

- The P/N 95643-00/-01/-02/-03 bracket assembly contains the 9/16-inch diameter main gear sidebrace stud, P/N 95299-00/-02, and a two-piece bushing, P/N 67026-6.
- The P/N 95643-06/-07/-08/-09 bracket assembly contains the 5/8-inch diameter main gear sidebrace stud, P/N 78717-02, and a one-piece bushing, P/N 67026-12.
- Both the one-piece and the two-piece bushing have a visible portion of the bushing flange, i.e., bushing shoulder.
- Whether a one-piece or two-piece bushing is installed may be determined by measuring the outside diameter of the bushing flange with a micrometer (jaws of the caliper must be 3/32-inch or less). The two-piece bushing will have an outside diameter of 1.00 inch and the one-piece bushing will have an outside diameter of 1.128 to 1.130 inches. This measurement is not valid for the following airplanes:

Model

Serial Numbers

PA28R-180

28R-30004 through 28-31270

PA28R-200

28R-35001 through 28R-35820, and 28R-7135001 through
28R-7135062

The main gear sidebrace studs on these airplanes will require removal to determine the P/N installed.

- The one-piece bushing contains a visible chamfer in the center of the bushing, and the chamfer in the two-piece bushing is not visible when the stud is installed.
- If P/N 95643-00/-01/-02/-03 bracket assembly is installed or the above information cannot be utilized, the main gear sidebrace stud will need to be removed from the bracket to determine the shank diameter and main gear sidebrace stud P/N.
- P/N 95299-00 and P/N 95299-02 main gear sidebrace studs are 9/16-inch in diameter.
- P/N 78717-00 main gear sidebrace studs are 5/8-inch in diameter.
- P/N 95643-00/-01/-02/-03 bracket assembly may have been modified to accommodate the 5/8-inch diameter main gear sidebrace stud, P/N 78717-02.
- The embossed number of 95363 on the bracket forging is not the bracket assembly P/N.

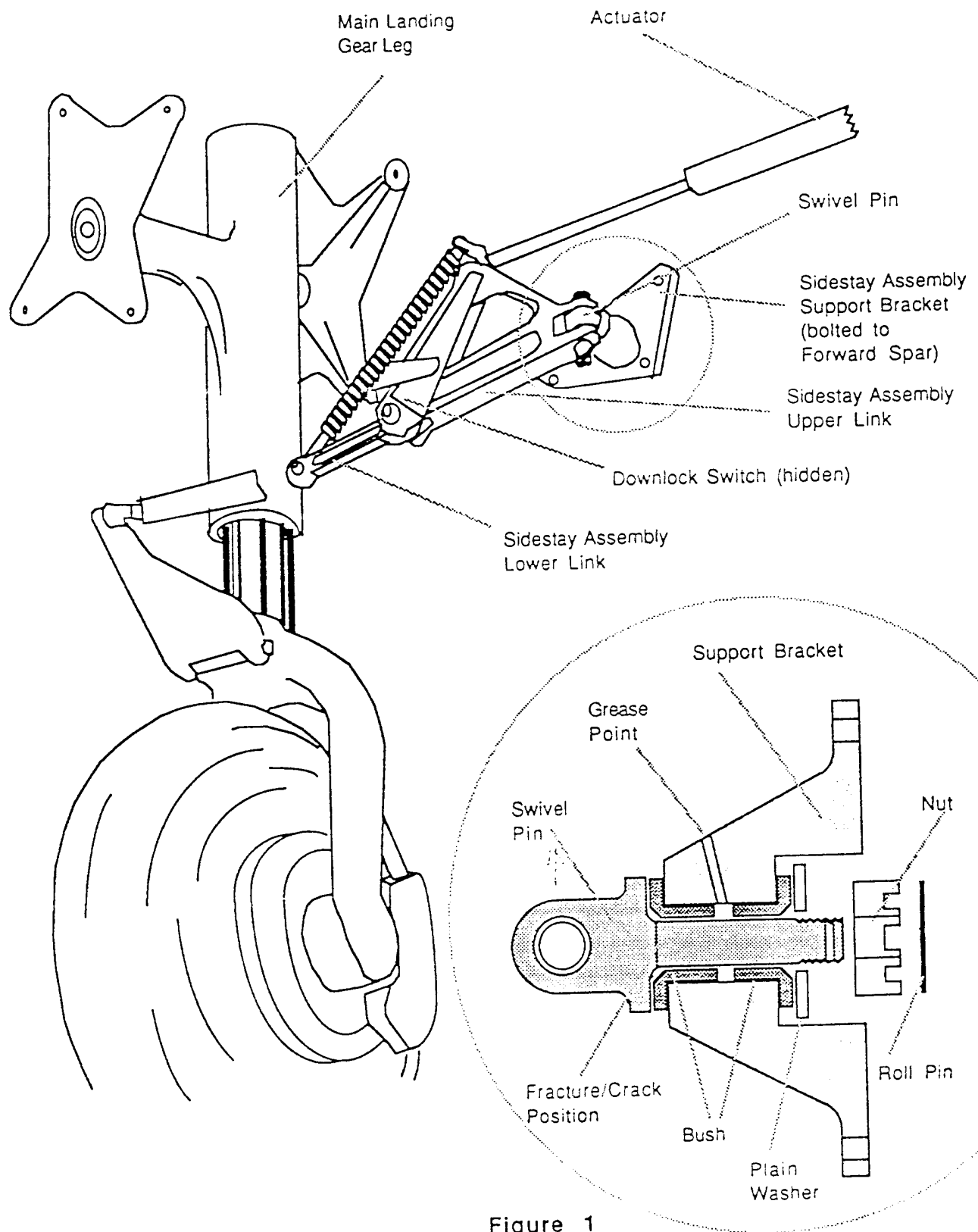


Figure 1

AD 97-01-01